

CUSTOMER LOYALTY PROGRAMS
AND SYSTEMS AND METHODS FOR SUCH PROGRAMS

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**CUSTOMER LOYALTY PROGRAMS
AND SYSTEMS AND METHODS FOR SUCH PROGRAMS**

1. CROSS REFERENCE TO RELATED APPLICATIONS

5 This application claims priority from U.S. Application No. 09/400,417, filed September 21, 1999, herein incorporated herein by reference, and additionally claims the benefit of U.S. Provisional Application No. 60/268,044, filed February 12, 2001, herein incorporated herein by reference.

2. FIELD OF THE INVENTION

10 The present invention is directed to customer loyalty programs, and to systems and methods for such programs, that provide a plurality of loyalty vehicles, including for example equity investment programs and current incentives, and that obtain member tracking data from a plurality of sources, including for example merchants and
15 financial networks, such as payment or credit-card networks. In different embodiments, the programs, systems, and methods may be used in e-commerce and in on-line and/or off-line commerce.

3. BACKGROUND OF THE INVENTION

20 Merchants and credit card companies have developed a number of customer award programs in attempts to incentivize customers, for example by enhancing customer loyalty. Merchants have long offered coupons to customers with the hope that the customers will be enticed to purchase a product with the coupon and subsequently develop some loyalty to the product or the merchant. More recently, merchants and credit card
25 companies have set up programs where customers earn award points through the purchase of products or services with a credit card. The award points may then be redeemed towards other products or services offered by merchants.

As the Internet has gained in popularity as a shopping destination, similar customer award programs have been developed. For example, U.S. Patent No. 5,774,870
30 describes a fully integrated on-line award program wherein a user earns award points by purchasing products on the offering entity's web site. The offering entity keeps track of these award points, and they may be redeemed by the user to purchase products from an on-line award catalog displayed on the offering entity's web site.

Over the years, investment-based customer award programs have also been
35 offered to customers. For example, U.S. Patent No. 5,297,026 describes a credit card based customer loyalty program wherein the offering entity determines the total amount of credit

card purchases a participating customer has made during a given period, and credits an investment account owned by the customer with up to 10% of that total amount. The offering entity has complete discretion over how the money allocated to the customer is invested. It simply guarantees a percentage return on the investment, or ties the investment to a published interest rate. The investment is in no way tied to what products the customers have purchased with the credit card.

Another investment-based customer award program is described in U.S. Patent No. 5,233,514. This patent describes a customer loyalty program wherein customers receive credit towards the purchase of stock in a given company by sending in UPC labels from products that they have purchased from the given company. The entity collecting the UPC labels authenticates the UPC labels and maintains an account that accumulates the amount of credit the customer has earned. The account is kept such that when a customer has accumulated enough credit to purchase a share of stock in the given company, the entity purchases the share in the name of the customer.

This scheme also has flaws. First, the rebate mechanism is cumbersome for both the customers and the offering entity. Customers must remember to cut out UPC labels from product packages and mail the labels to the offering entity to receive any credit for their purchases; and the offering entity has to authenticate, scan, and track the UPC labels. At least in cases where the dollar value represented by a single UPC label is low, the cost of maintaining a customer account is likely to be high relative to the value of the stock accumulating in the customer's account. Moreover, the customer can invest only in the stock of the companies whose products have been bought.

Additionally, these and other existing schemes suffer from inflexible customer incentives. Customers can typically use their rewards, points, or other reward currencies only for purchase of a particular product, or from a fixed product selection, or for purchases from only a certain merchant or manufacturer, or for investments in only preselected equities, or so forth. Once a particular loyalty program has chosen customer incentives, they are usually virtually impossible to change without change of the entire program.

Further, along with the Internet, financial networks that effect consumer payments and funds transfers have developed at a rapid rate. Once credit card transactions depended on paper receipts and the handling and clearing of these receipts. Now virtually all such transactions are electronically processed at the point and time of sale via payment-card networks. This processing already generates consumer transaction information, and in the future, it is expected that purchase and product details will be available on these

networks. In view of modern financial and payment-card (such as credit card) networks and their expected development, requiring a customer or a merchant to take any but the most minimal actions to identify a transaction to a loyalty program is an anachronism.

There thus remains a need for improved customer loyalty programs that are user-friendly, that offer a range of flexible and attractive loyalty vehicles, that are at most minimally intrusive to both merchants and customers, and that are structured to take immediate advantage of current financial and payment-card networks and their further imminent developments.

Citation or identification of a reference in this Section or any section of this application shall not be construed that such reference is available as prior art to the present invention.

4. SUMMARY OF THE INVENTION

The present invention solves these problems in the prior art, and has for its objects the provision of customer loyalty programs which, *inter alia*, includes a flexible range of loyalty vehicles for incentivizing customer loyalty. These loyalty vehicles may range from short-term incentives, such as direct and currently available rebates or rewards, to long-term incentives, such as investments in securities that provide deferred but accumulating yields. Moreover, the present invention also includes, *inter alia*, a flexible range of methods for tracking transactions of program members at participating merchants or manufacturers. In addition to receiving tracking information directly from the participants, a preferred embodiment may issue credit-card-like cards to program members which are recognized by credit-card point of sale equipment, and can be processed over credit-card payment networks. When such a card is presented during a member transaction, it automatically causes generation of transaction tracking information transmitted to the loyalty program. In further embodiments, other electronic payment means may be adapted to automatically generate tracking information with virtually no specific member action.

Loyalty programs of the present invention may preferably be implemented by an administrative entity, an administrator, which receives information from members, participating merchants, financial networks, and so forth, and transmits instructions to its agents for carrying out the loyalty program. These agents are economic actors, such as banks, brokers, transfer agents, escrow agents, and so forth.

Loyalty programs of the present invention may be preferably performed on network-attached computer systems operated by the administrator. These systems maintain

databases of at least member, participating merchant, and transaction information useful for performing loyalty-program functions, and they compute incentive monies due from participants. They also receive computer messages concerning member and participating merchants, transactions, the state of administrator and member accounts, and so forth which
5 are used to update stored data. They also transmit messages containing instructions, for example, to send and disburse monies, to buy and sell securities, to update accounts, and so forth. Generally, these systems perform the methods of this invention under the control of computer programs, which may be made available on computer-readable media.

Specifically, the invention provides a method of providing a loyalty program
10 for incentivizing members of the loyalty program to transact business with business participants of the loyalty program comprising registering the members, including issuing cards to registered members which can be processed by a financial network, identifying member transactions at participants when the financial network processes member cards which are presented during member transactions at participants, receiving rebates from the
15 participants according to the identified member transactions, and allocating received rebates to one or more loyalty vehicles for the benefit of the members, whereby the members are incentivized to transact further business with the participants.

The method further provides that the one or more loyalty vehicles comprises a first loyalty vehicle, and wherein the step of allocation further comprises allocating all
20 rebates received to the first loyalty vehicle.

The method further provides that the one or more loyalty vehicles comprise a first and a second loyalty vehicle, and wherein the step of allocation further comprises allocating rebates between the first loyalty vehicle and the second loyalty vehicle.

The method further provides that the financial network further processes
25 payment by credit card.

The method further provides that the step of identifying member transactions further comprises identifying values of the member transactions.

The method further provides that member transactions comprise purchasing goods or services, and wherein the step of identifying member transactions further
30 comprises identifying the purchased goods and services.

The method further provides that member cards do not have a payment function, and wherein the financial network does not authorize payment by member cards when member cards are presented during member transactions at participants.

The method further provides that the financial network further transmits
35 messages to locations where members have presented member cards, and wherein the

transmitted message includes indicia indicating that the member transaction has been successfully identified.

The method further provides that member cards have a payment function, and wherein the financial network authorizes at least partial payment by member cards
5 when member cards are presented during member transactions at participants.

The method further provides that the member card is a credit card, debit card, store-issued credit card or stored-value card.

An alternate embodiment provides a method of providing a loyalty program for incentivizing members of the loyalty program to transact business with business
10 participants of the loyalty program comprising registering the members, identifying member transactions at participants including identifying total transactions values and identifying the goods and services purchased, receiving rebates from the participants according to the identified member transactions, and allocating received rebates to one or more loyalty vehicles for the benefit of the members, whereby the members are incentivized to transact
15 further business with the participants.

This method further provides that the rebates received vary in dependence on both the total transaction value and on the identities of the goods and services purchased.

An alternate method of providing a loyalty program for incentivizing loyalty program members to transact business with program participants comprises registering
20 members, receiving rebates from participants based on transactions performed by members at the participants, and allocating received rebates to two or more loyalty vehicles for the benefit of the members, whereby the members are incentivized to transact further business with the participants.

The method further provides that the participants are merchants,
25 manufacturers, or providers of payment services to the members.

The method further provides that the loyalty vehicles further comprise an investment fund wherein the composition of the fund reflects at least in part the rebates received from the merchants.

The method further provides that the loyalty vehicles further comprise direct
30 member incentives wherein the direct incentives comprise values which are available for at least partial payment of member transactions according to the specifications of the participants.

The method further provides that the specifications of the participants comprise limitations on the subject or the location of member transactions.
35

The method further provides that the step of registering members further comprises issuing cards which can be processed by a financial network, and further comprising processing the member card to provide at least partial payment for member transactions from the values of the direct incentives.

5 The method further comprises identifying member transactions at the participants, and requesting rebates from the participants according to the identified member transactions.

The method further provides that the step of identifying further comprises identifying member transactions by the participants.

10 The method further provides that the step of registering members further comprises issuing cards which can be processed by a financial network, and wherein the step of identifying further comprises identifying member transactions by the financial network upon processing member cards presented during member transactions.

 An alternate embodiment provides a method of performing a loyalty program
15 for incentivizing members of the loyalty program to transact business with business participants of the loyalty program comprising providing one or more program computer systems comprising one or more processors and database memory having stored therein information representing (i) members and issued cards, (ii) participants and participant instructions for computing rebate amounts, and (iii) member transactions at participants,
20 receiving registration information for registering members and updating the database, wherein cards are issued to members and the registration information comprises issued-card information, wherein issued cards can be processed by a financial network and comprise information identifying members, receiving transaction-tracking information identifying member transactions at participants and updating the database, wherein the
25 transaction-tracking information is received from the financial network which generates such tracking information upon the processing of member cards which are presented during member transactions at participants, determining rebate information due from participants in dependence on the stored information representing participant instructions and the member transactions, wherein the processors determine the rebate information, and
30 transmitting allocation-instruction information for causing the allocation of the determined rebates due and available to one or more loyalty vehicles for the benefit of the members, wherein the processor determines the instruction information, whereby the members are incentivized to transact further business with the participants.

 The method further provides that the financial network is a payment-card
35 processing network, and wherein the transaction tracking information further comprises an

indication that payment authorizations for member transactions have been declined by the financial network.

5 The method further comprises the step of transmitting a message to the location of the member transaction and during the member transaction indicating that payment authorization has been declined.

The method further comprises the step of transmitting a message to the location of the member transaction and during the member transaction indicating that the member transaction has been successfully identified.

10 The method further provides that the step of receiving registration information comprises receiving information transmitted to the program computer systems via a computer network connection.

The method further provides that the step of receiving transaction-tracking information comprises receiving information transmitted to the program computer systems via a computer network connection with the financial network.

15 The method further comprises transmitting rebate-instruction information for causing the determined rebates to be made available by the participants.

20 The method further comprises receiving information indicating that the transmitted rebate-instruction information has resulted in the determined rebates to be made available, and receiving information indicating that the transmitted allocation-instruction information has caused the due and available rebates to be allocated.

The method further provides that the processors further determine the allocation-instruction information to cause management of security investments for the benefit of the members.

25 The method further provides that the administrators further determine the allocation-instruction information to cause management of security investments for the benefit of the members.

30 The method further provides that the processors further determine the allocation-instruction information so the security investments comprise securities of the participants in proportions which reflect at least in part the rebates due and available from the participants.

The method further provides that the processors further determine the allocation-instruction information to cause direct incentives for the benefit of the members.

35 The method further provides that the database further comprises information representing participant instructions for allocating rebates due and available, and wherein

the processors further determine the allocation-instruction information in dependence on the stored information representing participant allocation information.

The method further provides that the stored information representing participant rebate instructions comprise a rebate percentage, wherein the stored information
5 representing member transactions comprise total values of transactions at the participants, and wherein the processors determine rebates due as the rebate percentage of the total transaction value.

The method further provides that the stored information representing member transactions comprise identities of goods and services purchased, and wherein the
10 processors determine rebates due to vary in dependence on the identities of the goods and services purchased.

An alternate embodiment provides a method of performing a loyalty program for incentivizing members of the loyalty program, at least some of the members having electronic payment means, to transact business with participants of the loyalty program
15 comprising providing one or more program computer systems comprising one or more processors and database memory having stored therein information representing (i) members, (ii) participants and participant instructions for computing rebate amounts, and (iii) member transactions at participants, receiving registration information for registering members and updating the database, receiving transaction-tracking information identifying
20 member transactions at participants and updating the database, wherein the transaction-tracking information is generated by electronic payment means which members employ for transactions at participants, determining rebates due from participants in dependence on the stored information representing participant instructions and the member transactions, wherein the rebate information is determined by the processors, and
25 transmitting instructions for causing the allocation of the determined rebates due and received to one or more loyalty vehicles for the benefit of the members, wherein the instructions are determined by the processors, whereby the members are incentivized to transact further business with the participants.

The method further provides that the electronic payment means generates
30 transaction-tracking information during processing of cards presented by members during transactions at participants, wherein the cards comprise information identifying members.

The method further provides that the electronic payment means include credit or debit card payment networks, or electronic check means, or electronic cash means.

The invention also provides a method of performing a loyalty program for
35 incentivizing members of the loyalty program to transact business with business participants

of the loyalty program comprising providing one or more program computer systems comprising one or more processors and database memory having stored therein information representing (i) members, (ii) participants and participant instructions for computing rebate amounts, and (iii) member transactions at participants, receiving registration information for
5 registering members and updating the database, receiving transaction-tracking information identifying member transactions at participants and updating the database, determining rebate information due from participants in dependence on the stored information representing participant instructions and the member transactions, wherein the processors determine the rebate information, and transmitting allocation-instruction information for
10 causing the allocation of the determined rebates due and available to two or more loyalty vehicles for the benefit of the members, wherein the processor determine the instruction information, whereby the members are incentivized to transact further business with the participants.

The method further provides that the transaction-tracking information is
15 received from the participants.

The invention also provides a method of performing a loyalty program for incentivizing members of the loyalty program to transact business with business participants of the loyalty program comprising providing one or more program computer systems comprising one or more processors and database memory having stored therein information
20 representing (i) members, (ii) participants and participant instructions for computing rebate amounts, and (iii) member transactions at participants including information identifying total transaction values and goods and services purchased, receiving registration information for registering members and updating the database, receiving transaction-tracking information identifying member transactions at participants and updating the database,
25 determining rebate information due from participants in dependence on the stored information representing participant instructions and the member transactions, wherein the processors determine rebates due to vary in dependence on the total transaction values and on the identities of the goods and services purchased, and transmitting allocation-instruction information for causing the allocation of the determined rebates due and available to two or
30 more loyalty vehicles for the benefit of the members, wherein the processor determines the instruction information, whereby the members are incentivized to transact further business with the participants.

The invention also provides a computer system for providing a loyalty program for incentivizing members of the loyalty program to transact business with
35 business participants of the loyalty program comprising database memory having stored

therein information representing (i) members and issued cards, (ii) participants and participant instructions for computing rebate amounts, and (iii) member transactions at participants, and one or more processors capable of accessing the database memory and configured with at least one computer program for causing the processors to perform the steps of receiving registration information for registering members and updating the database, wherein cards are issued to members and the registration information comprises issued-card information, wherein issued cards can be processed by a financial network and comprise information identifying members, receiving transaction-tracking information identifying member transactions at participants and updating the database, wherein the transaction-tracking information is received from the financial network which generates such tracking information upon the processing of member cards which are presented during member transactions at participants, determining rebate information due from participants in dependence on the stored information representing participant instructions and the member transactions, wherein the processors determine the rebate information, and transmitting allocation-instruction information for causing the allocation of the determined rebates due and available to one or more loyalty vehicles for the benefit of the members, wherein the processor determines the instruction information, whereby the members are incentivized to transact further business with the participants.

The invention also provides a computer system for providing a loyalty program for incentivizing members of the loyalty program, at least some of the members having electronic payment means, to transact business with business participants of the loyalty program comprising database memory having stored therein information representing (i) members, (ii) participants and participant instructions for computing rebate amounts, and (iii) member transactions at participants, one or more processors capable of accessing the database memory and configured with at least one computer program for causing the processors to perform the steps of receiving registration information for registering members and updating the database, receiving transaction-tracking information identifying member transactions at participants and updating the database, wherein the transaction-tracking information is generated by electronic payment means which members employ for transactions at participants, determining rebates due from participants in dependence on the stored information representing participant instructions and the member transactions, wherein the rebate information is determined by the processors, and transmitting instructions for causing the allocation of the determined rebates due and received to one or more loyalty vehicles for the benefit of the members, wherein the

instructions are determined by the processors, whereby the members are incentivized to transact further business with the participants.

The invention also provides a method of performing a loyalty program for incentivizing members of the loyalty program to transact business with business participants

5 of the loyalty program comprising database memory having stored therein information representing (i) members, (ii) participants and participant instructions for computing rebate amounts, and (iii) member transactions at participants, and one or more processors capable of accessing the database memory and configured with at least one computer program for causing the processors to perform the steps of receiving registration information for

10 registering members and updating the database, receiving transaction-tracking information identifying member transactions at participants and updating the database, determining rebate information due from participants in dependence on the stored information representing participant instructions and the member transactions, wherein the processors determine the rebate information, and transmitting allocation-instruction information for

15 causing the allocation of the determined rebates due and available to two or more loyalty vehicles for the benefit of the members, wherein the processor determines the instruction information, whereby the members are incentivized to transact further business with the participants.

The invention also provides a method of performing a loyalty program for

20 incentivizing members of the loyalty program to transact business with business participants of the loyalty program comprising database memory having stored therein information representing (i) members, (ii) participants and participant instructions for computing rebate amounts, and (iii) member transactions at participants including information identifying total transactions values and goods and services purchased, one or more processors capable

25 of accessing the database memory and configured with at least one computer program for causing the processors to perform the steps of receiving registration information for registering members and updating the database, receiving transaction-tracking information identifying member transactions at participants and updating the database, determining rebate information due from participants in dependence on the stored information

30 representing participant instructions and the member transactions, wherein the processors determine rebates due to vary in dependence on the total transaction values and on the identities of the goods and services purchased., and transmitting allocation-instruction information for causing the allocation of the determined rebates due and available to two or more loyalty vehicles for the benefit of the members, wherein the processor determines the

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instruction information, whereby the members are incentivized to transact further business with the participants.

The invention also provides a computer program for configuring one or more processors, wherein the processor have access to database memory having stored therein information representing (i) members and issued cards, (ii) participants and participant instructions for computing rebate amounts, and (iii) member transactions at participants, to perform the steps of receiving registration information for registering members and updating the database, wherein cards are issued to members and the registration information comprises issued-card information, wherein issued cards can be processed by a financial network and comprise information identifying members, receiving transaction-tracking information identifying member transactions at participants and updating the database, wherein the transaction-tracking information is received from the financial network which generates such tracking information upon the processing of member cards which are presented during member transactions at participants, determining rebate information due from participants in dependence on the stored information representing participant instructions and the member transactions, wherein the processors determine the rebate information, and transmitting allocation-instruction information for causing the allocation of the determined rebates due and available to one or more loyalty vehicles for the benefit of the members, wherein the processor determine she instruction information, whereby the members are incentivized to transact further business with the participants.

Finally, the invention provides a computer-readable media having recorded thereon a computer program as described above.

The term "securities" is used herein in its broadest sense to refer to stocks, bonds and all other instruments of the types regulated under the Securities Act of 1933, 15 U.S.C. § 776 and under similar international regulations.

These and other features of the present invention will be better understood after reading the remainder of this application.

5. BRIEF DESCRIPTION OF THE FIGURES

The present invention may be understood more fully by reference to the following detailed description of the preferred embodiment of the present invention, illustrative examples of specific embodiments of the invention and the appended figures in which:

Fig. 1 illustrates a flowchart of loyalty programs according to the present invention;

Fig. 2 illustrates an exemplary system for practicing the loyalty programs of the present invention;

Fig. 3 illustrates in more detail the entities with roles in loyalty programs of the present invention and their interactions;

5 Fig. 4 illustrates an exemplary web page of a member of a loyalty program of the present invention; and

Figs. 5A-C illustrate systems and messages in a payment network that provides input to the present invention.

10 6. DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

This invention is described in more detail herein, where: Section 5.1 describes loyalty programs in general; Section 5.2 describes methods and systems for loyalty programs; Section 5.3 describes sources of data tracking transactions of loyalty-program members; Section 5.4 describes allocation of member rebates and rewards to
15 loyalty vehicles present in a loyalty program.

6.1. SUMMARY OF LOYALTY PROGRAMS

The present invention provides a wide range of customer loyalty programs together with computer systems and computer-implemented methods for their performance.
20 Generally, loyalty programs are taken herein to mean marketing arrangements in which tangible or intangible incentives, such as rebates or rewards, are provided to purchasers of goods and services in order to induce desired future behaviors, such as repeated purchases from merchants or manufacturers (referred to as program "participants"), repeated use of financial institutions (such as credit-card issuing banks), increased size of purchase, and so
25 forth.

According to the present invention, loyalty programs are conducted under supervision of the administrator, which can include one or more administrative sub-entities, or other internal arrangements as deemed prudent according to legal and business considerations. The administrator provides, creates, invokes, manages, enters into
30 contractual or other arrangements, or so forth with other external entities in order that they may act as its agents in carrying out the activities necessary for a loyalty program, including, *inter alia*, registering members and participants, receiving incentives from the participants, allocating the incentives to various loyalty vehicles on behalf of the members, and so forth.

Persons become loyalty-program members and able to receive program
35 incentives by registering with the program, preferably after agreeing to its terms and

conditions (or reaching agreement with the administrator). Members are typically real persons, but may include legal persons of all types. Organizations transacting business with customers become loyalty-program participants and able to offer program incentives by also registering, preferably after reaching agreement with the administrator. Loyalty-program participants may include a wide range of organizations that deal with customers, for example, merchants of goods and services, manufacturers or importers of goods, providers of services, financing providers such as credit card companies and banks, or so forth.

When a loyalty-program member completes a transaction at a loyalty-program participant, the participant makes agreed-upon incentives available by means of the administrator to the account of the member. The administrator obtains information for determining incentives, allocates determined incentives to various loyalty vehicles, and then causes transfer of the incentives from the participants to the loyalty vehicles for the use of the members. Incentives may be intangible or tangible rebates, rewards, options or so forth, and are often rebate monies with or without conditions on their uses. The present invention provides loyalty programs with a broad range of novel methods of obtaining information concerning incentives due from participants by tracking transactions between members and participants, and also with a broad range of loyalty vehicles that provide participants with targeted member incentives.

In one preferred embodiment, the administrator obtains information tracking member transactions at participants directly from the participants themselves. For example, in embodiments for e-commerce or on-line merchants, individual member transactions at participants (which, for example have World Wide Web (hereinafter, simply "web") sites for their customers) are electronically tracked by use of the participants' existing e-commerce or business data processing infrastructure. Participants extract member purchase (tracking) information from their infrastructure, and transmit it to the administrator, either in real-time or in batches (a batch including, for example, transactions for an hour, day, week, or other appropriate interval). This embodiment may include credit-card loyalty programs, merchant loyalty programs, manufacturer loyalty programs, and so forth. In particular, the cards used in the "credit-card" programs may be widely-accepted credit or payment type cards, or may be credit or payment type cards accepted at a single merchant or merchant association, or merchant value-type cards.

In another preferred embodiment, the administrator may issue member identification ("id") cards having physical characteristics so that they may be recognized by credit-card point-of-sale ("POS") equipment, and be processed over existing financial networks, such as payment-card or credit-card networks. Here, transaction tracking data is

generated by the financial networks when members present their id cards during transactions at participants. Where the id cards have no payment functions, payment may be made by conventional means, such as cash, check, regular credit card, or so forth. Since this embodiment is able to track transactions at legacy "brick-and-mortar" merchants or manufacturers as well as at on-line merchants or manufacturers, it is referred to herein as an "off-line" embodiment. In sum, this invention contemplates obtaining member transaction tracking information from a variety of sources: directly from the participants, from acquiring banks of participants, from issuing banks of members, loyalty program member id cards, directly from credit-card and other payment-card networks, and so forth.

In all embodiments, transaction tracking information preferably includes information identifying the goods and services that are part of a transaction, such as by standard commercial or product codes. With such information, more granular loyalty programs can provide, for example, incentives discriminating between different merchants, between different manufacturers, between different merchants at which different manufacturers' goods were purchased, and so forth.

Moreover, the present invention provides loyalty programs in which incentives, such as rebates or rewards, received by members can be allocated between various loyalty vehicles in a single loyalty program in order to reinforce different member behaviors according to the desires of different participants. A preferred loyalty vehicle includes security investments, preferably investments in a fund of equities, more preferably in a fund having at least in part equities of participants, which, in one embodiment, are allocated, directly or indirectly, depending on net purchases made by members at participants. Such a loyalty vehicle is expected to incentivize long term loyalty.

Current (or direct) incentives are another type of loyalty vehicle, which may be offered along with, for example, security investments in a single loyalty program. Current incentives may include: freely usable rebate monies; discounts or credits freely useable towards any future purchases; discounts or credit targeted towards purchases of particular goods or services, or of any goods and services of a particular manufacturer, or at a particular merchant, or of a particular manufacturer at a particular merchant, or so forth.

Carefully targeted current incentives, automatically available to customers and with low processing costs for merchants, offer new marketing and promotional opportunities. For example, a current incentives vehicle where incentives are awarded upon purchase of a particular manufacturer's products, offers a novel and efficient manner of eliminating cumbersome paper-based rebate coupons, which must be individually handled by customers and processed at processing centers. Indeed, a loyalty program of the present

invention using membership id cards that are automatically processed at the point of sale and coupled with the automatic identification of purchased products makes available the information with which to tailor altogether new, efficient, and low cost incentive programs.

Therefore, the present invention is attractive to both merchants,
5 manufacturers and customers for at least the following reasons:

1. Customers are attracted to the program because it is user-friendly, providing both simple tracking of their relevant purchases with a minimum of effort on their part, in preferred embodiments merely by purchasing products or services from one or more
10 of the participating merchants or manufacturers, and also providing diversified uses for their rebates, in preferred embodiments, to equity investments,.
2. Further, systems of this invention may provide each member with a customized web page which tracks the accumulation and application of their rebates, including the performance and composition of any equity investments made. This page may also
15 have links to web sites of all merchants or other participants, or to those most heavily used by the member. Whenever members log onto this system home page, they are reminded of the merchants, the good will extended by the merchants toward the members, and the fact that they have an interest in using the merchants for further transactions.
- 20 3. Merchants are attracted to the program because members develop specific interest in the participating merchants, for example via equity ownership through a diversified investment fund. Since members become owners of the merchant, merchants thus benefit from a closer relationship with their customer/owners. Many in the industry say, "An owner is the best customer."
- 25 4. Individual merchants benefit from the cross marketing inherent in the structure of the fund. That is, since the fund may be composed at least in part of shares in public merchants based directly or indirectly on rebates received by the members, each member may own not only the merchants at which he shops, but also the shares of other public merchants.
- 30 5. Through programs of this invention, merchants are able to offer their customers tangible and diverse rewards unlike any others currently available. In a world of competition ever more defined by lowest price, they are able to reward customer loyalty in an innovative way which will forge a long-lasting relationship based on ownership, partnership, and good will.

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This invention includes a single loyalty program combining many members types, participant types, means of obtaining member transaction tracking data, and loyalty vehicles. It also includes programs more targeted to one or a few types of members and participants which obtain tracking data by one or a limited number of means and offer one
5 or a few focused loyalty vehicles. However, without being limiting, the following description is directly primarily to programs with members who are individuals, the programs anticipated to be initially of most importance.

6.2. METHODS AND SYSTEMS

10 The general functioning of the loyalty programs of the present invention, along with exemplary computer systems,- for practicing these methods is now described.

6.2.1. LOYALTY PROGRAM METHODS

Fig. 1 illustrates the general functioning of loyalty programs according to the
15 present invention. First, in step 1, the administrator negotiates registration agreements with merchants, manufacturers, financing organizations, or other commercial organizations which seek to become program participants.. These agreements preferably include schedules and other details of rebates, rewards, or incentives made available to loyalty program members for purchasing or transacting business with a participant, and also
20 schedules for allocating rebates, rewards, or incentives among loyalty vehicles (if more than one) offered by the loyalty program. Public or private merchants or both, selling either on-line or off-line, may be becomes program participants.

Next, in step 3, the administrator registers members. Member registration collect at least minimal identifying information necessary for legal, security, and regulatory
25 purposes, and for simplicity can be performed either on-line, for example, using an Internet-attached personal computer, or off-line, for example, by returning using paper forms. If identifying cards ("id" cards), payment cards or other cards are used in a loyalty program, member registration also obtains information necessary for the card issuing banks, or other card issuing organizations.

30 After successful registration, in step 5, as members transact business at participants, rebates, rewards, or other incentive currencies become due them, according to the incentive schedules, which are first established at participant registration and can be updated from time-to-time by the participants. In step 7, amounts due are determined from these schedules and from information tracking member transactions, and periodically, *e.g.*,
35 in real time, or daily, or weekly, or monthly, requests are made to the participants for

transfer of these amounts due. Step 9 allocates rebate or reward amounts received to various loyalty vehicles according to the initially established (and optionally updated for time-to-time), allocation schedules. If no allocation schedules are provided, the amounts due can be allocated according to member request or loyalty-program decision.

5 Since in a preferred embodiment, incentives are allocated at least in part to investment portfolios including at least in part securities of the participants, in step 11, the administrator directs the purchases and sales of investment securities, and issues and redeems evidences of member ownership interests (for example, shares of an investment fund) . At step 13, members are incentivized by tracking owned investments, selling owned
10 investments, and optionally buying additional investments with separate funds.

 In another embodiment, rebate amounts may be allocated to direct incentive programs which members may use for additional transactions. In an exemplary implementation, each member has a direct incentive account, which is updated in step 15 with allocated incentive amounts. Members are then incentivized by using in step 17 their
15 direct incentives for further transactions, purchases, upgrades, and so forth.

 Loyalty program activities as just described are managed and supervised by an administrative entity (simply, an "administrator"), which, although described herein as a single functional entity, may actually consist of more than two or more legal entities. The administrator acts, *inter alia*, by entering into agreements, such as member and participant
20 registration agreements; by obtaining member transaction tracking information; by requesting funds, such as incentive amounts due; by dispensing funds received, such as allocating incentive amounts to loyalty vehicles; by managing loyalty vehicles, such as causing securities to be bought and sold; and so forth. Since many of the administrator's actions may be actually performed by separate agent entities (illustrated in Fig. 3) that
25 provide information to and respond to instructions from the administrator, the administrator may manage and supervise by monitoring and instructing its agents. This monitoring and instructing may include: updating information reflecting accounts held by agents for, *inter alia*, member transactions, rebate monies, and so forth; formatting messages to agents with, for example, instructions to transfer funds, to buy or sell securities, to determine present
30 values, and so forth; interpreting messages received from agents and updating administrator accounts; responding to queries from members and participants; and so forth. In a preferred embodiment, most of these actions are preferably performed by administrative computer systems (illustrated in Fig.2) which electronically communicate with the agent entities, for example, with the computer systems of these other entities..

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6.2.2. LOYALTY PROGRAM ADMINISTRATION

Fig. 3 illustrates, in a preferred embodiment, the administrator, the entities responsive to (agents of) the administrator for performing loyalty programs of this invention, and the interactions (exchange of information, instructions, value, and so forth) between the administrator and its agents. Although in other legal or regulatory contexts, the agents of the administrator may be fewer or more numerous, their combined functioning will be substantially equivalent to the preferred embodiment described next.

Administrator 52 negotiates 53 contracts with participants 51, which reflect agreement that the participant will rebate a scheduled amount (for example, a percentage) of the purchase price of products or services bought or used (or other measure of transaction value) by members of the loyalty program, and that the administrator will allocate the rebate currency as specified by the participant (or by the member), for example, by investing in a diversified mutual fund which purchases shares, *inter alia*, in the publicly-traded securities of participating merchants. The rebate amounts and their allocation may depend on the type of product, the merchant, the manufacturer, or other parameters of the member transaction. Both reward amount and allocation may be updated from time-to-time by the participant. These contracts may also preferably include: provisions that the participant agrees to pay the administrator a fee for the administrator's services in establishing and operating the loyalty program; provisions concerning the mechanics of tracking, calculating, requesting and paying over the rebate monies to the administrator; and so forth. Provisions relating to web site content may also be included, for example, mutual hyperlinks between the participant's web site the loyalty program's web site, a statement on the participant's web site that it is a (merchant, manufacturer, financier, or other type of organization) participant in the system, and/or a statement on the participant's web site listing the rebate schedules offered to loyalty program members), similar statements on the program's web site, and so forth.

The schedule of rebates and rewards in a simple embodiment simply includes percentages (perhaps, sliding percentages) of the purchase price of products or services bought or used by members of the loyalty program that will be provided as a rebate. In further embodiments where adequate tracking data is made available, the rebate may depend on which merchant locations are used, or on which manufacturer's products (or financial products) are used, or on combinations of these factors. Rebates may also depend on the total amount or on the total number of products in a transaction so that the participant may provide volume discounts. Further, if the loyalty program member also belongs to another group favored (or disfavored) by a participant, the rebate may be increased (or decreased). For example, if the loyalty program maintains histories of

member transactions, a favored group might be a member who frequently transacts business at a participant. Rebates or rewards may also depend on further factors to achieve particular marketing objectives of participants.

In addition, numerous types of incentives may be offered by a program. In a simple embodiment, an incentive may be an amount of rebate money that is freely useable by a participant. Alternatively, uses of rebate money may be restricted to certain merchants, or certain products, or certain products and certain merchants, or so forth. Generally, usage restrictions may be represented in the systems of this invention by rules provided by participants. Also, incentives may be "currencies" not convertible into money, including for example, merchant "points", coupon values, airline miles, and so forth. Allowed usage of such "currencies" is usually strictly limited, often requiring specific authorization by a participant for a proposed use.

Administrator 52 also registers 54 potential members 50 prior to their use of the loyalty system. During registration, which can be easily accomplished with on-line forms available on the administrator's web site, potential members assent to preferably pre-defined program terms and conditions, and provide certain personal, demographic, and system-related information. This information may include name, password, social security number, address, gender, age, employer, e-mail address, and so forth. Potential members may also be requested to supply the details for id cards, such as social security number and income, sample signatures, or other information typically required to open a new credit/debit card account with an issuing bank. If members will use their existing payment cards for program purchases, they may be asked to supply payment card details such as: member name as it appears on the payment card; type and brand of payment card (e.g., debit or credit; Visa, MasterCard, Discover, American Express, or so forth); and the payment card number. Payment card transaction information is one way by which the administrator may track member purchases at participants 51, and to subsequently request rebate monies due.

If equity investments 63 are available incentive vehicles, member registration may also provide user-friendly forms for opening a securities account for the purchase, sales, transfer, and ownership of securities. Via the securities registration forms, members may also provide administrator 52 (or member agents 55) with standing instructions to receive rebate monies earned by the member and invest such rebate monies in specified manners, for example, in a fund including at least in part merchant securities. When practiced in the United States, these funds are preferably mutual funds registered under the

Investment Company Act of 1940, as amended, and the Securities Act of 1933, as amended, 15 U.S.C. 78a *et seq.*, respectively.

In the event the U.S. Securities and Exchange Commission (SEC), or other government agency or law, requires separating investment fund management from other aspects of rebate and program management, the administrator may employ the services of one or more member agents 55 to receive rebate monies 58 from participants on behalf of members, and to invest such rebate monies (less any fee that may be charged by the administrator and agent) in the fund, perhaps by forwarding such rebate monies to administrator 52 or to escrow or other administrative account 56. When practiced in the United States, member agents will be registered securities broker/dealers. If member agents are used, the registration process will also obtain information for opening an account with member agents, and any standing instructions 60 will be submitted to the agents to receive the rebate monies, and to invest the rebate monies in the fund (or otherwise invest in securities), or forward such monies to the administrator of the fund or into escrow or other administrative account 56 for eventual investment. After opening an account and submitting standing investment instructions, a member will usually have little need for further interaction with their member agent.

After registration is successful, member preferably receive highly secure personal identifiers, such as passwords, certificates, or other secure identifiers, which provides access to member account statements and other account information through the administrator web site. To obtain this information, which is preferably formatted as personal member "home" pages, members navigate to the administrator's web site and enter their security identifiers.

Generally, home-pages (and dependent pages) display information on progress in the loyalty program in manners that will incentivize members in the manners sought by the various participants. Promotional offers, advertisements, and other information, from both participants and the administrator, may also be provided on the member web page. If direct incentives, as explained below, are available, a page may display total direct incentives of each type received, how these incentives have been used, the benefits gained, and the current status of all available direct incentives. This latter information may include, for example, that further purchases of a certain product from a participating manufacturer will be discounted for up to a certain amount, or on the next purchase for over \$100 at a certain merchant an extra \$10 will be available to the member, or so forth.

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Fig. 4 illustrates in more detail an exemplary member home page for equity fund investments. The illustrated page includes: a chart of fund performance versus various benchmarks 400; summary information on the fund 402; summary information on the member's holdings in the fund 405; information on credits 410 that the member has received towards the purchase of shares in the fund as a result of transactions and participants; hyperlinks to merchant web sites 415; a button or similar mechanism 420 to access further information concerning the member's account; a button or similar mechanism 425 to make direct investments in the fund; a button or similar mechanism to access a hypothetical calculator allowing the member to approximate a future account value based on possible future rebates (e.g., the member is able to enter in a rebate value of \$500 per year, and calculate the "hypothetical value" of his holding in 5 years, 20 years, etc. based on fund performance since inception); a button or similar mechanism 435 to redeem shares; and a button or similar mechanism 440 that provides access to more information concerning the fund.

Returning to Fig. 3, after member and participant registration, members 50 may carry out transactions 57 with participants 51. Commonly, transactions may be purchases of goods or services at participating merchants or from participating manufacturers, or use of credit or other financial services from participating financial institutions. Advantageously, member transaction may be performed over the web (or in other on-line manners), and hyperlinks to participant web sites may be provided at several different locations in the administrator web site, e.g., in member registration forms; in a page listing the merchants or other participants; in the member's home-page; or in other locations. These hyperlinks may be continually updated by administrator 52 to include new participants as the program expands. Therefore, in one preferred embodiment, members first access the administrator's web site, and use its hyperlinks as a portal to participant web sites to carry out transactions. As will be described below, use of the administrator's web site as a portal may provide for tracking of a member's transactions at a participant (and determining rebate information by the administrator system). Alternatively, member may directly access merchant web sites, without first navigating to the administrator's web site. In this case, the participant can collect and send member transaction information to the administrator (either in real time or in periodic batched). In another preferred embodiment, members are provided with id cards, or combined payment and id cards, which automatically provide tracking information to the administrator when processed by existing credit-card networks (or other payment-card or financial networks). The present invention is applicable to other tracking mechanisms as will be described below.

After members have transacted business with participant, rebate and reward monies 58 (or the indications of values of other reward "currencies") are forwarded by participants 51. Monies may be forwarded by the participants without administrator request, as a result of participants own tracking of member transactions, or preferably at administrator request, as a result of administrator tracking some or all member transactions. Forwarded monies are received directly by the administrator 52, or preferably by segregated escrow or other administrative accounts 56 for the benefit of members. Segregated accounts are preferred to provide heightened program security, and therefore increased attractiveness to members. The escrow or other administrative accounts may be managed at an agent bank; the account may be an account where the administrator receives interest on the deposited rebates. Where member agents 55 are employed, participants 51 forward rebate or reward monies 58 (or the indications of values of other reward "currencies") to these member agents, which, acting according to standing member instructions, either forward the monies 59 on to administrator 52 or on to escrow or other administrative account 56, or directly invest the monies (not illustrated). The members have the option of updating 60 their standing instructions to their agents. Member agents are optional if the administrator can act as the member agent.

Rebate monies are held in the escrow or other administrative accounts until they are allocated to loyalty vehicles according to the member preferences and instructions. Fig. 3 illustrates two preferred loyalty vehicles, equity investments 63, particularly equity investments in funds including at least in part participant securities, and current incentive programs 62. Administrator 52 manages the allocation 73 of rebate and reward monies among the various loyalty vehicles, and also provides necessary administrative instructions, direction and control of the various loyalty vehicles by interaction 64.

For the equity investment vehicle, agents of the administrator, such as transfer agents and brokers, transfer rebate monies, purchase shares and securities, receive purchased shares and securities, and perform corresponding transfers upon share redemption, preferably as book entries without physical transfer of money, checks, or certificates, except for settlement purposes. The administrator manages and directs these agents, and keeps internal information reflecting account status at its agents. Transfer agents preferably administer funds and transfers monies or shares 67 to the members under the direction of the administrator; brokers (if different), also under the direction of the administrator, preferably purchase and sell securities, particularly participant securities, on stock exchanges 65 for transfer 66 to and from the investments and funds 63. If appropriate, transfer agents and brokers may be affiliated, or the administrator may itself

perform one or both of these functions. The dollar value of the shares equals the dollar value of the rebates (less any fee that may be charged by the administrator and as adjusted by direct sales and purchases) which each member received on his online purchase of products or services from the participants. Also, members may make investment requests

- 5 68, which are processed by the administrator and result in updates to a member's investments in the loyalty program and directions to the transfer agents and brokers. Members communicate, for example by on-line messages, to direct the administrator, and thus the transfer agent, to process such share purchase and redemption forms by buying or selling shares and transferring proceeds 67 to the requesting member. Electronic
- 10 confirmations are preferably provided to each member by the administrator system, for example, on members' web pages and also by e-mail.

Current incentives 62 are monies, discounts, incentives, and other reward currencies available for a member's immediate use. Optionally, uses of current incentives may be limited by the participants in manners to incentivize desired member behaviors.

- 15 Member current incentives may be, preferably, held in member escrow accounts 72 with a banking-type institution acting as an agent of the administrator (or with a financial transaction processor for a banking-type institutional agent). Member escrow accounts 72 are available for settling member transactions 70 (optionally, according to the limitations of the participants) in a manner similar to stored-value cards or debit cards. Transfer of
- 20 monies and credits in and out of these accounts is preferably handled, as in the case of equity investments, as book entries without the physical transfers. Specifically, under the administrator's direction and management, banking-type institutional agents receive rebates and rewards allocated from escrow or other administrative account 56 to current incentives 62, and then place received rewards 71 in accounts 72 for member use.

- 25 Directions from the participants for use of their direct incentives may be, preferably, represented in the systems of this invention as rules limiting how accounts 72 may be used for transaction settlement. For example, rules may specify how, where, for what, and so forth payment requests would be honored (either when transmitted in real-time from the point of sale or during batch processing). If honored, a specified amount will be
- 30 transferred in payment, and the current incentive available correspondingly reduced; if not honored, the payment request would be declined. Paying and declining payment requests are known functions of payment networks, such as the networks maintained by credit card associations. These rules may be physically stored in association with member incentive accounts so that they would be available during the processing of payment requests.

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Further, it is preferable that the rules associated with these current incentive accounts could be updated by administrator 52 in response to directions from the participants.

6.2.3. ADMINISTRATIVE SYSTEMS

5 Routine functions of the administrator are typically performed by programmed computer systems referred to herein as "administrative computer systems" or simply "administrative systems". Discretionary functions, such as negotiating agreements with potential participants, are typically performed by the operators of the administrative computer systems.

10 Core functions of the administrative computer systems include: receiving or obtaining information tracking member transactions at participants; requesting monies, rebates, rewards, and incentives from participants depending on the tracked member transactions and on the participant rebate schedules; allocating and dispensing these monies to various loyalty program vehicles, and managing the loyalty program vehicles. Other
15 administrative system activities include managing and directing both member agents in handling member rebate monies, and also the administrator's own agents which handle, *inter alia*, escrow accounts, current incentive accounts, equity investment accounts (and other loyalty vehicle accounts). Also, the administrative computer systems participate in registering participants and members, and receive and respond to queries and directions
20 from participants and members.

 These functions in preferred embodiment involve extensive electronic communication with external computer systems, such as systems of, *inter alia*, participants, members, banks, payment processors, transfer agents, brokers, and so forth. If id or payment cards are used in a program, the administrative computer systems also preferably
25 electronically communicate directly with payment network systems or their gateway systems. Communication may be in a transaction mode, a batch mode, or other convenient communication mode. Where external systems generate member transaction tracking information throughout the day on, administrative computer systems may receive tracking information on a transaction by transaction basis, or the tracking information may be
30 transmitted in batches hourly, daily, or with other convenient periodicity. For example payment networks, such as credit-card networks, may send member transaction tracking messages in real-time during each transaction. Other external systems, for example, those of merchants, may generate transaction tracking information only during periodic batch processing cycles, for example, during nightly processing, after which it can be sent to the
35 administrative system in batches (that is, aggregating the transaction data). For agents of

the administrator, usually only periodic communication is required (*e.g.*, hourly, daily, weekly, and so forth) to transfer, for example, instructions on daily securities transactions, on transfer of rebate monies, on maintenance of escrow or other administrative accounts. The latter communications may be advantageously structured as file transfers, the files containing net results and net instructions for the period. Administrative systems respond to these electronic communications by updating system databases, and possibly, generating and transmitting further instructions and responses to the external systems.

Fig. 2 illustrates exemplary administrative computer systems 22 and 23 (the "administrative systems") for implementing the loyalty programs of the present invention.

Generally, system users 20, for example, members, participants, agents, and so forth, interact with (provide information to, receive direction from, and so forth) loyalty programs by means of networks 21 and interface systems 22 that communicate with systems 23, which have databases 26 that store loyalty program data and processors 24 that are controlled by computer programs to perform the methods of the loyalty programs. The administrative systems 22 and 23 operate under the supervision of administrator 52 (Fig. 3) which is responsible for the loyalty programs. Although, as Fig. 2 illustrates, any class of user can communicate via any convenient means of communication, certain communication means are typically used by certain users. Members, who typically use PC-type computers at their remote locations, may access loyalty programs of this invention via public networks 41 connected to one or more web servers 37, which are suitably protected by firewalls and controlled by load balancers 38. Participants and participant systems, *i.e.*, commerce systems at merchants or manufacturers, may access the loyalty programs over public networks 41 or through other, perhaps private, network links 42, such as dedicated communication lines. Public networks 41, of course, include the Internet, but also may include various proprietary public network backbones. Other networks 42 may include private networks or private specific point-to-point or switched links, and may access the administrative systems through other communication interfaces 36.

The administrative systems communicate with external systems to obtain member transaction tracking data. In one preferred embodiment, member tracking data may be transmitted from participants' computer systems using the one or more of the above communication methods. In another preferred embodiment, tracking data is extracted by financial payment-processing networks 40 and sent to the administrative systems (optionally, transaction-by-transaction). Financial payment networks include especially those operated by credit card associations, such as VISA, MasterCard, American Express, and so forth.

The administrator systems allocate member rebates/rewards to loyalty program incentive vehicles by means of communications with computer systems of the administrator's agents. In the case of equity investments, these may be systems of financial intermediaries, security brokers, transfer agents, separate member agents (if needed, for example, for regulatory compliance), and so forth. These communications (instructions and responses) may be transmitted as files using, for example, the FTP protocol via FTP servers 39. In the case direct incentive loyalty programs, communications may be with banking-type institution which maintain the direct incentive accounts, and are usually performed by means of FTP transfers between FTP servers. These communications are used to create accounts, to credit and debit accounts, to inquire about account their status. Other intermediaries, including credit card processors, merchant banks, and so forth, may communicate with the administrator system via public and private networks, either in files transferred by FTP, or transaction by transaction, or by other means.

In more detail, web servers 37 implement one or more administrator web sites for members (and participants and others), which are accessible via the Internet preferably only through firewalls 38. If system loads requires more than one web server, load balancers 38 provide balancing between individual web servers. Application servers 37 may optionally assist in transferring formatted information between the web servers and one or more database servers 23. Additional firewalls internal to the administrative systems may be provided as needed for security.

The one or more database servers 23 preferably are programmed general purpose computers that includes one or more processors 24 with processor-accessible memory (such as RAM), long-term database memory 26 (such as magnetic disk drives configured by a database system), and input/output means 25. The input/output means are used, among other tasks, to exchange information between database servers 23 and the communication systems 22 that connect to external communications. Database memory 26, *i.e.*, configured computer disk storage, stores formatted and encoded items of information used to process the programs of this invention, including information concerning, *inter alia*, members 27, participants 28, purchases, rebates and rewards 29, investment funds and direct incentive accounts 30, member accounts 31, on-line financial products/services 32, administrative information, such as payment card issuers 33, and computer programs 34 for causing processors 24 to perform the methods of the implemented loyalty programs. More than one database server may be provided if needed for load sharing or reliability.

Stored member information 27 preferably includes for each member: name, address, e-mail address, copy of authorized signature, unique member identification such as

a system identification number, a secure personal identifier such as a password for accessing the system web site, credit card information, social security number, preferences for allocating rebates and rewards, and other information extracted from the member's completed registration form, and so forth. Upon submitting the registration form, the database server 23 creates in the member database 27 records for the new member, extracts the information from the registration form, and preferably assigns a system identification number to the member. Membership registration is advantageously automated to the extent possible by the systems of this invention operating under the supervision of the administrator. Member information may be updated upon member request, such as requests made through the administrator web site or automatically through, for example, credit reports.

Stored participant information 28 preferably includes for each merchant, manufacturer, financial intermediary (such as a credit card issuer) and so forth that has agreed to provide rebates to members of the program: unique identification such as a system identification number, rebate, reward or discount schedules that the merchant has agreed to provide to members, limitations on use of direct incentives, rewards or discounts awarded to member purchasers, instructions for requesting and obtaining rebate monies, and so forth. Participant registration is also advantageously automated to the extent possible using information provided at participant registration and updated on participant request.

Stored purchase/rebate information 29 preferably includes information, for each member, concerning purchases made at merchants or manufacturers, use of financing services, such as credit cards, of financial institutions participating in the loyalty program, and other participant transactions. Tracking information received by the administrator that includes at least total transaction amounts of members is used to compute and update this rebate information according to the rebate schedules of the participants. This information also preferably includes, for each participant, rebate monies, rewards, or other incentives that are due from or have already been received. This latter information is updated upon transmission of administrator requests for monies and upon receipt of information concerning monies received by member agents, by the escrow or other administrative account, or directly by the administrator.

Stored fund and incentive database information 30 preferably includes information relating to the investment fund or funds offered, in a preferred embodiment, for allocation of member rebates, including holdings of participant securities, fund ownership by members, past and present fund performance, and so forth. This information may also include other investment vehicles, such as individual securities, non-equity security funds,

or so forth, and their member ownership. In view of, for example, the current portfolio or security holdings and recently received rebates, the administrative system transmits instructions, for example, in files transferred by FTP, to the computer systems of its agents to make security purchases or sales. Share purchases are confirmed to administrative systems, for example also via FTP server 39, by electronic messages which are then used to access and to automatically update the stored investment fund information 30 to reflect the new portfolio composition and member share ownership.

In the case of direct incentive loyalty vehicles, the administrative systems transmit instructions to its banking agents holding rebate funds (for example escrow or other administrative account 56) to transfer funds to member incentive accounts, and receives messages confirming completion of its instructions. These instructions and confirmations may be in files transferred by FTP, or may be by formats appropriate to interbank transfer networks, or may be transaction-by-transaction.

Stored member account information 31 preferably includes information about the composition of a member's rebates, rewards or discounts that are due from participants or that have already been received, and the composition of outstanding portfolio ownership and currently-available direct incentive accounts. It may also retain a history of the member's past transactions at participants and a history of benefits received from the loyalty program. This information is updated along with rebate/reward information and investment/incentive information using input from the same sources. It is queried in response to, for example, request for on-line information by members who have accessed the administrator web sites. Optionally, this information can be combined with member information 27.

Products/services information 32 preferably includes other financial or non-financial products or services that may be offered to members at the loyalty program web site.

Administrative information 33 preferably includes necessary information to operate the administrative systems, such as system configuration, preferred networks and protocols for communicating with various agents and intermediaries, help information for customer service representatives and members, and so forth. This information is updated when configuration changes, typically under the direct control of system operators. Administrative information may also include funds available in the various accounts controlled by the administrator, such as the escrow account.

These computation and communication activities of the administrative computer systems are preferably implemented as computer programs 34 written in a

computer language, such as C, C++ or Java. Programs are translated into machine instructions, and are stored in long-term memory until needed by the processor, when they are loaded into computer-accessible memory for causing the loyalty program methods of this invention to be performed. If the programs are interpreted, their execution as machine language instructions is usually deferred until needed by the processor. These programs may initially distributed to the administrative systems on computer readable media of any sort, for example on magnetic disks or tapes, optical disks, or across a network connection, such as from an internet server. These media store these computer programs in a suitable encoded form.

The databases of the systems of this invention can be organized as known in the art. For example, it is preferable for them to be implemented as relational databases by using commercially available relational database systems, such as those from Oracle Corp. or Sybase, Inc. System databases can alternately be implemented by other database systems, or even as files provided by a file system.

It is to be understood that Fig. 2 and the above discussion describes an exemplary system of the present invention. This invention is not limited to such a system, but includes systems of other architectures implementing similar communications and computational activities that are known to those of skill in the art.

6.3. SOURCES OF MEMBER TRACKING DATA

This section describes various methods for obtaining data tracking member transactions at participants necessary in order to accomplish the loyalty programs of the present invention. Advantageous methods are those that can tap into existing financial data and financial data communications with a minimum disruption to existing commercial computer systems. As those skilled in the art will recognize in view of the following description, certain tracking methods may be more or less preferable depending on the nature of the members and participants in a particular loyalty program. Also, it will be recognized that the present invention is not limited to the tracking methods described herein, but can readily be practiced with other methods of obtaining tracking data that obtain substantially the same information.

Tracking information may be transmitted to communication interface systems in various manners. For example, where the data is periodically obtained by participants, an appropriate method may be periodic (e.g., daily, weekly, or so forth) transmission of a batch of member transactions by known means and employing normal business security considerations. Such transmission may be via public, private, or switched

communication networks using transport protocols such as FTP and so forth. Where the data is transmitted from financial payment networks, messages may be transmitted transaction-by-transaction from a financial network gateway or interface.

Received tracking data is used by database servers 23 to automatically
5 update rebate/reward database information 29 and possibly member accounts 31. Stored
rebate/reward database 29 as well as member database 27 would be updated to reflect
member purchases, and by extension, credits earned; participant database 28 may be
updated to reflect the rebate monies owed by the participants to the administrator.
Specifically, the information is updated to reflect each individual member's purchases and
10 the credits earned based on those purchases, and to reflect the purchases made at the
merchant and thus the rebate monies owed to the administrator by the merchant. Rebate
amounts are computed by processors 24 in view of the stored participant rebate/reward
schedules.

Rebate monies are then electronically requested from participants, and
15 transferred, for example, by clearinghouse networks or wire transfers to administrator or
agent accounts with banking or financial intermediaries. Transferred rebate monies are
held, as described, in escrow or other administrative account 56 (Fig. 3), perhaps in the
name of a third-party escrow agent. If permitted by law or regulation, these monies may be
held directly in administrator accounts. Messages confirming successful transfer are
20 preferably messages transmitted to the administrative systems. (Alternately, these systems
may monitor transfers by periodic account inquiries.)

After rebates have been transferred, they are allocated to loyalty vehicles
according to member allocation instructions (or by default). These instructions are
evaluated by computer systems 23. Allocated monies are then transferred to, for example,
25 equity or current incentive accounts from escrow or other administrative accounts. All
money requests and transfers are preferably performed by electronic communication using
existing payment or financial networks, if possible.

Next, member transaction tracking is described.

30 **6.3.1. MERCHANTS/MANUFACTURERS**

In one embodiment, participating merchants or manufacturers may identify
member transactions from their financial systems by collecting data identifying, *inter alia*,
the member, the amount of the transaction, optionally the type and contents of the
transaction, and so forth. This data is then transmitted to the administrative systems, either
35 on a transaction-by-transaction basis or in periodic files aggregating the transactions during

the prior period. For concreteness but without limitation, this embodiment is first described in the case where members make purchases at on-line merchants.

First, members may access the loyalty-program web site (operated by the administrator or its affiliates and implemented on the administrative systems), and using
5 hyperlinks may further access any of the various participating merchants that are listed on the loyalty-program web site. The administrative systems then transmit a loyalty-program identifier tag to the merchant database server that identifies the transaction at the merchant web site as involving a program member. The identifier tag is stored by the merchant database server along with the transaction information. Next, on some periodic basis, the
10 merchant may query its database server to retrieve all transactions that include program identifier tags in order to build a file that preferably includes the total rebate amount owed to the administrator for that period along with its breakdown between the members. This file would be transmitted to administrative systems 22 and 23 (Fig. 2), by, for example, using the FTP protocol and accessing FTP servers 39.

15 Other identifying methods may be used in this case. For example, the member may be assigned a special e-mail address at the administrative system, which is a requested input when making purchases at on-line merchant web sites. The merchant systems may then transmit the details of the purchase to the member's special e-mail address for use as described above by the administrator or the administrative systems.
20 Rebate monies can be automatically forwarded at the time of the transaction, or alternatively, be forwarded only on rebate transfer instructions from the administrative systems.

In a further example, the administrative system web servers 37 may be configured such that when a member clicks on a merchant on the administrator's or its
25 affiliate's web site, a web page co-branded between the administrator and the merchant is transmitted. Such web pages can be physically stored on the administrator web servers or the merchant's web server. In the case where the administrator web server 37 provides the co-branded web pages, member purchases on such pages can be directly tracked by the administrative systems 22 and 23. In the case where the merchant's web server provides the
30 co-branded web pages, the merchant's web server tracks member purchases, and merchant systems may transmit the details of the purchase to the member's special e-mail address for use by the administrator or the administrative systems as above. Rebate monies can also be either automatically forwarded at the time of the transaction, or alternatively, be forwarded only upon rebate transfer instructions from the administrative systems.

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6.3.2. CREDIT CARD ISSUING BANKS

Credit card issuing banks may provide member transaction tracking information either by being a participant in a loyalty program like a merchant or manufacturer, or by providing access to their credit card accounts held by loyalty program members.

In a first embodiment, a credit card issuing bank is a participant, and a member receives rebates or rewards based on use of an issued credit card. In this case, during registration, members complete an credit card application, which in the preferred embodiment is a co-branded credit card between the administrator and a credit card issuing bank (e.g., MBNA). The credit card issuing bank has agreed with the administrator to pay rebates based on purchases made with the card, and can track total amount of purchases made by each member using the credit cards by, for example, scanning its already available credit card account information for member transaction. Each member's credit card usage information is transmitted to administrative systems 22 and 23, and the total rebate amount due the administrator is transferred from the credit card issuing bank, either automatically or upon request. These embodiments and alternatives apply equally to other forms of payment cards, such as debit cards or store-issued credit cards.

With a credit card issuer as a participant allows member to receive rebates and rewards for purchases of goods and services not only at the web sites of on-line merchants but also at the brick-and-mortar presences of off-line merchants. In addition, a particular loyalty program may include both credit card issuers and merchants, with which the administrator has also negotiated rebates for member purchases. On-line member purchases, whether or not credit cards of the card issuers, may be tracked as in the on-line purchase case above. Off-line purchases, whether or not at the participating merchants, may be tracked as in the credit card case above. Here, member's account details, or at least the purchase amounts at participating merchants, must also be transmitted to the administrative systems to provide the merchant tracking information. Allocation of rebates or rewards may now depend on whether participating merchants were used, whether an issuer credit card was used, on whether both participating merchants and an issuer credit card were used, or on other combinations possible in view of the detail of the member tracking information.

In another embodiment, a member's after-acquired or pre-existing credit cards may be used to make loyalty-program purchases. Here, card identification by for example, name, card number and expiration date, is provided during member registration (or subsequently), and this identification is used to retrieve tracking information from the issuing bank's payment information databases. Payment information is normally

accumulated at issuing banks (or their processors) for holders of their issued cards, and may be searched by card number or secondarily by merchant. This information includes at least transaction date/time, merchant and payment amount, and is reported on a holder's periodic statement. (Also acquiring banks (or the processors) may accumulate similar transaction information, at least for certain statutory time periods, which is available by primarily merchant and secondarily by card number.)

In this embodiment, the administrative systems have stored member credit card information, either because it has been provided upon registration or because the credit card was co-branded and applied for upon registration. This credit card information may be stored, for example, as part of member database 27 (Fig. 2). To identify such member purchases for tracking, database server 23 would periodically (e.g., daily, weekly, monthly, etc.) retrieve member credit card identification and transmit it, for example by using FTP server 39, to the issuing banks typically identified by digits 2 through 6 of the card number. For example, the administrator may supply to the card processors and merchant banks:

- member name as it appears on the registered credit card(s); type of credit card (e.g., Visa, MasterCard, Discover, or American Express) as indicated by the first digit of the credit card number; and the users account number typically indicated by the seventh and succeeding digits of the credit card number. With such information, the issuing banks search their account databases for purchases made by the members (and preferably only at merchant sites). The purchase information generated by this search is then transmitted back to the administrative systems via, for example, FTP servers 39. In a preferred embodiment, this activity is completed on-line using the administrator system and the computer systems of the merchant banks and card processors communicating via the various means 21. This task may also be performed by a third-party provider with access to the relevant purchase information.

Alternatively, where credit cards are co-branded between a loyalty program and an issuing bank, the bank already knows which holders are members, and may make a record of this in a holder's information. Then, such an issuing bank could supply tracking information for such members without input from the administrative systems. In a further alternative, acquiring systems can be queried to search for participating merchant or manufacturer credit card billing records by providing lists of participating merchants or manufacturers. Also, acquiring systems could be queried for member credit card payment records.

6.3.3. PAYMENT NETWORKS

In a preferred embodiment, member transactions may be tracked by payment networks otherwise devoted to credit or debit card processing. In this embodiment, a loyalty program member would be provided with a credit-card-type card that is recognized by the payment card processing system. Such a card, generically referred to herein as a
5 loyalty card (or an "id" card), would have a valid and correctly-formatted account number as well as such physical features and indicia, such as a standard size and a standard-format magnetic stripe, sufficient for it to be recognized at point-of-sale terminals and other terminals capable of recognizing credit or debit cards. The basic function of a loyalty card is to identify a loyalty program member at the point of the transaction (also, the point-of-
10 sale, or "POS") and at the time of the transaction (also, the time-of-sale, or "TOS") in order that the payment card processing systems can automatically generate transaction tracking data.

In certain embodiments, loyalty card have no further functions. However, it may be preferably for a loyalty card to be provided with additional, optional convenience
15 features. For example, a loyalty card may also function as a payment card by being associated with either a credit account or a demand account. Also, a loyalty card can function as a direct incentive vehicle by being associated with a demand account charged (or credited) with value by rebates/rewards allocated by the loyalty program. This embodiment may advantageously have rules controlling allowed debits from the associated
20 demand account, such as by only allowing payments for the products of a certain manufacturer made at a certain merchant. In the following, a loyalty card with only the basic function is referred to as an id-loyalty card (or simply as an "id-only" card); a card with payment features as a payment-loyalty card (or simply as a "id-payment" card); and a card with direct incentive features as an incentive-loyalty card (or simply as an "id-
25 incentive" card)

For a loyalty program to be able to "issue" even simple id cards, it may be necessary for the program to become associated with a bank that otherwise issues standard credit cards. This is due at least to the operating agreements and membership agreements of present payment processing systems. To be able to issue id cards or id-payment cards with
30 optional payment features (requiring associated accounts), association with one or more banks may be imperative. For another example, id-payment cards may be co-branded between the loyalty program and a bank that otherwise issues standard payment cards. Therefore, in a common but not limiting embodiment, loyalty programs are described as being associated with issuing banks that are capable of and actually issue loyalty cards to
35 program members upon request. The following description primarily addresses this

preferred embodiment, and separately describes the functions of the loyalty program and of the issuing bank. However, in other embodiments, the loyalty program itself would be capable of issuing loyalty cards, and issuing banks are not necessary. The following description is immediately applicable to this latter embodiment by simply combining the functions of the issuing bank into the administrator of the loyalty program.

Before describing the gathering of member tracking information using loyalty cards, basic features of existing payment-card networks are described.

Payment Networks Generally

Fig. 5A illustrates an exemplary payment-card network, including computer systems of the principal actors and communication links between these systems. Such a network can support processing of either credit or debit cards. Fig. 5C, in which identical elements have identical reference numbers, illustrates the principal messages in network during this payment-card processing. In this latter figure, downward pointed arrows represent the advance of time during transaction processing. In both these figures, double-headed straight arrows 110-112 represent generally commercial transactions, while communication arrows 113-117, 150, 151 and 154-157 represent communications links or electronic messages exchanged between computer systems. Entities 100-104 represent the principal parties, along with their network-connected computer systems, that participate in member transactions and from which transaction tracking information is generated. Further, financial network 105 represents a payment/clearing network, such as the networks of the VISA or MasterCard associations. In accord with commercial practice, part of all of the computer systems of loyalty program 100, registered merchant 102, card issuer 103, payment gateway 104 and financial network 105, which process payment messages and transactions, may be subcontracted to third parties. Therefore, for example, payment gateway 104 may represent both a processor computer system, which handles messages and some or all of the related account processing, and also an acquiring bank, which may have further computer systems for certain account processing it chooses not to subcontract. Computer systems for loyalty program 100 and payment gateway 104 may be similarly configured.

For reference, first, the tracking-information embodiments previously described in Section 5.3.1 are generally illustrated in Figs. 5A and 5C by messages represented by the open dashed communication arrows and numbered 113' and 113". These messages are not part of the present embodiment, but may also occur if a loyalty program obtains tracking data according to both embodiments. Message 113' represents the

embodiment in which tracking data is obtained from registered merchants or manufacturers 102 and directly transmitted to loyalty program 100. As described above, this communication may take place over the Internet, or other communication network, transaction-by-transaction or in batches of transactions. Message 113" represents the

5 embodiment in which a payment card issuer is registered in a loyalty program and electronically transmits member tracking information directly to the administrative systems. Generating transaction tracking information in these embodiments requires special software (or software modification) at each of the registered participants, merchants, manufacturers or card issuers, which extracts tracking information during routine commercial processing 10 and transmits it to the administrative systems. Special operational procedures at each participant may also be needed to periodically gather and transmit this information.

In a more preferred embodiment, member transaction-tracking information is generated and transmitted to a loyalty program automatically, as an incident to otherwise normally-occurring processing and requiring no special software or special procedures 15 actions by registered participants. The current embodiment achieves automatic tracking by using existing functions of payment-card processing for new purposes, or alternatively by adding minimal new enhancement, to existing payment card transaction processing. Therefore, any necessary modifications or changes can be made once in payment processing systems, and need not therefore be individually made at each participant. This lowers 20 overall loyalty system costs.

Before describing these enhancements, payment processing is first described for a sample transaction where a standard credit or debit card is used. The following description of the sample transaction is primarily directed to the payment cards of multi-bank card associations, such as VISA or MasterCard. But this example is not limiting, 25 because the present invention is also applicable, first, to the well known variations of this model where the functions separately described herein are performed within one administrative entity (such as the American Express system), and second, to further variations that one of skill in the art will appreciate to be equivalent to the following.

With reference to Figs. 5A and 5B, when card holder 101, having a payment 30 card issued by card issuer 103, for example an issuing bank, makes, for example purchase 111, at merchant 102 and offers to make payment with the issued payment card, the merchant first obtains authorization at the TOS (time-of-sale) to charge the payment card with the purchase amount. Using POS (point-of-sale) terminal equipment, the merchant collects authorization information typically including, at least, payment card identifying 35 information preferably read from the card's magnetic strip, pre-entered merchant identifying

information, and the purchase amount, which can be manually entered or automatically transferred from the POS cash register. More advanced POS equipment may also “scan” products and make available their identifications, for example as universal product codes (“UPCs”), stock-keeping units (“SKUs”), and so forth. If this information is transmitted during payment processing, a loyalty program can advantageously capture and use it for novel and creative loyalty programs. The collected authorization information is then transmitted over communication link 114 to the merchant’s payment gateway 104 for the type of payment card used. The payment gateway is usually a bank that has agreed to acquire the merchant’s receivables for this type of payment card, or the acquiring bank’s third-party processor. Transmission of the authorization request, and subsequent reception of an authorization response, between the merchant and payment gateway is represented in Fig. 5C by message request/response exchange 150 illustrated as occurring at substantially the time of purchase 111.

Before approving the transaction, the payment gateway (or the acquiring bank), usually seeks real-time transaction authorization from the card issuing bank (or its third-party processor) by transmitting an authorization request over links 115 and 116, usually using the intermediation of financial network 105. Message exchange 151 represents the real-time inter-bank authorization request and response messages. Issuing bank processing of an authorization request message depends generally on whether the payment card is a credit card or a debit card. In the case of a credit card, the issuing bank typically checks the card holder’s account status, and authorizes the transaction if the holder has sufficient credit and there is no evidence of fraud. Credit card authorization processing may be done by the issuing bank’s processor. Otherwise, the authorization is declined. In the case of a debit card, or stored-value card having a fixed pool of available funds, the issuing bank must instead check for sufficient funds, and if approved, mark necessary funds as held to satisfy the upcoming settlement of the current transaction. Evidence of fraud may also be checked.

If the issuing bank authorizes the transaction, a positive authorization response message 151 is transmitted back to the payment gateway, which then transmits a positive approval response message 150 to the merchant’s POS terminal. The transaction may then be completed. Depending on the agreement between the merchant and the payment gateway, the payment amount may then be credited to the merchant’s account (alternatively, the crediting may be done later at settlement time). If the transaction is not authorized, the payment gateway receives an authorization response message 151 indicating

that the card transaction is declined; and the payment gateway indicates the same to the POS terminal. In this case, the card holder must use another form of payment.

Funds transfer from the issuing bank to the acquiring bank for authorized transactions typically proceeds by means of a clearinghouse function implemented in financial network 105. Either on a transaction-by-transaction basis, or in periodic (*e.g.*, hourly, twice daily, daily, etc.) transaction batches, merchant 102 transmits capture messages 154 to its acquiring bank requesting funds due and providing information on the transaction for which they are due. Net capture messages 155 are then transmitted by the acquiring bank into financial network 105. After performing a clearinghouse function, the financial network transmits to issuing bank 103 further capture messages indicating the transactions on that bank and requesting the net amount due. Issuing bank response to the capture messages effects funds transfer. For a credit card, the card holder's account may then be debited; for a debit card, the held funds are removed from the account.

Payment card processing has known variations to which the present invention is equally applicable. First, issuing bank 103 and acquiring bank 104 may be the same (known as "on-us" transactions). For "on-us" transaction, equivalent functions are performed internally in the computer systems of one bank that were performed by different banks in the example above, that is transaction authorization functions, or their equivalent, are performed at the TOS and settlement functions, or their equivalent between accounts, are performed then or later. Because processing is internal, message communication links 115 and 116 are now intra-bank, if they physically exist at all, and use of a financial network is not always necessary. A further variation is exemplified by American Express payment cards. American Express includes internally all the actors and communication links of Fig. 5A, that is American Express functions as both the issuing bank, the acquiring bank and the financial network. In this case also, authorization is performed at the TOS with settlement occurring then or later. The elements of Fig 5A may be functional and not physical.

Preferred payment networks are those maintained by Visa, MasterCard International, Inc. (Purchase, N.Y.), American Express, and Discover.

Gathering Tracking Information

The automatic gathering of loyalty-program tracking information is based upon minimal but novel modification to the above-described payment-card processing.

Gathering member-transaction tracking information, according to the present embodiment, results from a side-effect of authorization processing at the TOS. This processing in

skeleton form sends to the card issuer (or issuing bank) an electronic request message seeking payment approval, which then returns to the POS an electronic response message indicating, at least, payment approval or refusal. According to the present embodiment, the card issuer during authorization processing simply transmits authorization-time ("auth-time") message 153 (Fig. 5C) to administrative systems 22 and 23 (Fig. 2) of the loyalty program, which contains information extracted from the payment authorization request messages 150 and 151. This auth-time message includes minimal tracking information, *i.e.* card holder identifying information, merchant (generally POS) identifying information, and the amount of the proposed transaction, which is necessarily present in the pre-existing authorization request messages. Preferably, it may also include, where available, information identifying the goods or services of the proposed transaction and their supplier or manufacturer, or so forth, an indication of transaction approval or refusal, and so forth, which permit more fine grained loyalty programs.

Generation of auth-time message 153 has several embodiments. In an embodiment preferred for low cost and rapid implementation, this message is a pre-existing payment-system message, already generated but now used for the additional purpose of providing tracking information. This embodiment is described with reference to Fig. 5B illustrates portion 118 of Fig. 5A in more detail. Herein, card issuer 103b is illustrated as distinct from any third-party information processor 103a (where the card issuer is its own processor, this distinction may be only functional). In this simple embodiment, card issuer 103b issues id-only cards that are recognized by standard POS equipment and appear to the payment network as valid credit cards, but to a card holder or merchant appear, physically distinguishable from cards having an actual payment function (for example, by not having an embossed account number or showing less than the standard sixteen-digit number contained on credit cards). Payment must therefore be made by another means (cash, check, credit card, or forth). To identify a purchase, or other transaction, to the loyalty program, the member has the participant "swipe" such an id-only card, or otherwise enters the id-only card information, into the POS equipment along with at least the amount of the purchase. The payment system, in particular the payment gateway, then generates authorization request message 151, which arrives across transmission link 116 from financial network 105 at processor 103a, which then performs authorization processing.

In one alternative of this simple embodiment, the card's payment functions are disabled by marking the card account information maintained by the systems of the processor 103a (of by the systems of the issuer 103b) so that all payment authorizations for id-only cards are declined. In this case, an authorization response indicating denial is

returned to the merchant, and the id-card holder then effects actual payment by other means. In existing payment-card systems and with simpler POS equipment, it may not be possible to return to the POS a message indicating the true reason for denial. These systems may be limited to providing only a single, unqualified approval-denied indicia. Preferably,

5 authorization response messages provided by the payment system are capable of carrying, at least, coded reasons for approval denial, and one of the reason codes is for the loyalty program and causes display of helpful indicia, for example indicating that loyalty-program transaction identification is successful and payment may now be made.

More preferably, freely definable information may be transmitted in the
10 authorization response or in a message accompanying the authorization response. This information may include incentivizing information, perhaps specific to the card holder. Such information could include the estimated rebate/reward just received. It may also include reminders to the card-holder from the loyalty program system. Further, it may include promotional offers to the card-holder at the point of sale. Such offers could be for
15 items related to that just purchased, or to offers related to the merchant, or so forth.

Now, turning finally to generation of tracking information, during credit card authorization denial in pre-existing payment-card networks, processor 103a usually generates a further message reflecting the denial and including information about the denied transaction, and transmits it at authorization time to issuing bank 103b via communication
20 link 117'. This real-time transmission of denial information helps the issuing bank typically identify excessive credit usage by its customers, to identify and staunch a developing fraud before losses accumulate, and for other security reasons. In the present implementation, the pre-existing denial message is simply sent to the loyalty-program administrative systems 22 and 23. In order words, loyalty program 100 is made to appear to processor 103a as the
25 issuing bank 103b for these id-only cards, and thereby its administrative systems (possibly along with the formal card issuer 103b) receive all denial messages for id-type cards from processor 103a. The information in these auth-time denial messages is sufficient for member transaction tracking.

For debit cards, similar authorization-time processing also permits a low cost
30 and rapid implementation by redirecting pre-existing authorization time messages to the loyalty program. To authorize debit-card payment, processor 103a virtually always communicates with issuing bank 103b, because it maintains the demand account records for its debit card holders. Accordingly, at authorization time, processor 103a transmits a message (often known as an "advice" message) over communications link 117 to issuing
35 bank 103b advising it of the transaction amount and requesting authorization. In normal

debit card processing, after checking for sufficient funds, and holding funds for settlement, the issuing bank responds to the processor. For debit-type id-only cards, the loyalty program again appears to processor 103a as the issuing bank, and its administrative systems receive thereby all advice messages. There are illustrated as auth-time messages 153 (Fig.

- 5 2). Administrative systems 100 then merely save transaction tracking information from advice message in its databases, and responds to processor 103a with a message denying the requested transaction.

These embodiments of low cost and rapidly implementable transaction tracking at authorization time are not limiting. For example, the computer systems and software of the issuing bank or of its processor may be modified to routinely generate new transaction tracking messages and transmit them to an appropriate loyalty program in all cases. The loyalty program to which the message should be directed may be identified from information stored in data bases in association with the card numbers.

15 Use of Payment-Type Cards

Turning now to id-payment cards and first to debit-type id-payment cards, loyalty-program tracking information can easily be obtained as just described from the pre-existing advice messages. Advice messages are routinely transmitted at authorization time to the issuing bank in order to check on funds availability and optionally to hold funds for settlement, and they contain sufficient information for loyalty program transaction tracking. These authorization-time messages can, for example, be simply mirrored to the administrative systems of loyalty program 100 from processor 103a when they are transmitted to issuing bank 103b. Alternatively, they can be re-transmitted from issuing bank 103b to loyalty-program administrative systems. Second, for credit-type id-payment cards, it may be necessary to minimally supplement authorization processing at processor 103a to produce a "pseudo-decline-type" message also in case of transaction approval. This new "pseudo-decline-type" message would contain at least member and participant identification and transaction amount so that the transaction can be tracked by loyalty program 100.

30 Incentive cards with a stored-value component may function, in a further embodiment, similarly to debit-type id-payment cards. These cards are (at least nominally) issued by a qualified issuing organization, such as a card-association member bank, which also holds the accounts funding these cards for individual member card holders.

Transaction tracking information may be generated as above by taking advantage of pre-existing advice messages, or their equivalent, which may be mirrored from a processor or

re-transmitted from the card issuer to provide the tracking information. In case payment authorization is declined due to insufficient funds or other cause, the payment processing may still be used for identification only purposes, for example by obtaining tracking information from pre-existing decline messages, and an appropriate message returned to the POS. Using coded, or preferably free-form fields, in the authorization response message, the card holder may be politely informed that, for example, although the holder's rebate value pool is too low, the current transaction is already poised to replenish the rebate value pool. Value is deposited in the debit-type id-card accounts asynchronously to payment transaction processing by loyalty program administrative systems when rebates or rewards are allocated to direct incentives for particular member cardholders. To carry out value updates, the loyalty program may send update messages 157 (Fig. 5C) to the card issuer computer systems of the issuer, or to those of its processor, where the account value is stored and processed.

In an alternative embodiment, use of debit-type id-payment cards can be restricted to achieve targeted and directed incentive programs. Directed programs can be implemented by, for example, attaching rules to each id-payment account, or group of accounts. The rules may be examined (or executed) at authorization time in view of information transmitted as part of the authorization process (and possibly also in view of the past behavior of a cardholder) to determine whether a particular transaction will be authorized even if there are insufficient funds. Use of rebates from a particular merchant can be limited to future purchases at that merchant by identifying the sources of funds in an account and authorizing a transaction only if the merchant requesting the authorization is a source of sufficient funds. Similarly, use of rebates from a particular manufacturer can be limited to that manufacturer's products if SKU or UPC information is available at authorization time so that the product for purchase can be identified. Use of rebates can be limited to products of a particular manufacturer purchased at a particular merchant. Use of rebates can be limited to a particular time, by keeping track of an expiration date for portions of the account and then debiting the account for that portion when it has expired. Similarly use of rebates can be limited to frequent purchases, purchasers in certain groups, or so forth.

The description above has considered only the information currently and commonly available on payment networks. Currently, product identifying information of SKU-type or UPC-type is not commonly available on payment networks. This information may become available with the increasing use of smarter, more capable POS equipment. When available, it can be extracted from payment network messages illustrated in Fig. 5C

and sent to the loyalty system, where it permits more granular loyalty programs to be implemented. For example, the electronic or on-line equivalent of product coupons may be cheaply implemented without the expense and customer inconvenience of handling paper coupons. When the administrative systems track purchases of a particular discounted
5 product, the offered reward or rebate could be generated as a credit to the member and a debit to the merchant or manufacturer, that is as an electronic coupon. The use of such an electronic coupon may be unrestricted or may be associated with rules restricting to particular products as described above. One of skill in the art may immediately conceive of further rebate or reward programs possible by using such information.

10 Also, the description above has considered tracking information available at authorization time. But the present invention is not so limited, and certain information may be partially or entirely transferred later in the payment process, for example, at funds capture time. Such information is represented by cap-time messages 156 transmitted to loyalty program 100. Although payment authorization generally needs to be done at
15 authorization time - authorization for id-only cards is always declined and authorization for id-payment cards is checked - transmission of further transaction details can be delayed until later. For example, product purchase identification can be transmitted to the loyalty program when available and linked with earlier authorization time information by, for example, a transaction identifier.

20 Although described above for off-line transactions at physical premises of merchants, the above methods and systems can also be equally used to track on-line transactions made at a merchant's "virtual" premises or through a merchant's catalog sales system. For example, an id-only card can be used on-line (or over the telephone or by mail or e-mail) in a manner exactly analogous to the off-line use described. It can be presented
25 first, followed by a payment card for actual payment. Id-payment cards can also be used on-line.

Use of Private-Label Cards

The present invention also includes the use above-described tracking
30 methods with private-label credit or payment cards. Individual merchants, such as department stores or gasoline distributors, use such private-label credit cards to extend credit to their customer only for purchases at their own venues. Since processing of these cards usually involves an on-line authorization checking at the TOS by the merchants computer systems, all the above-described loyalty-program tracking methods can be
35 straightforwardly applied to these cards.

Additionally, merchants may have stored value cards that have a fixed value that is debited for purchases. Where the current stored value is stored centrally on merchant systems, then authorization time processing is usually preformed, and may be similarly adapted to the above-described loyalty program tracking methods. In some cases, the current value may be stored on the card itself (for example, as in a smart money card). Here, the present invention can implement tracking methods by, for example, having merchant POS equipment that records member transactions, at least, member identity and transaction amount, and makes this information available to the administrator systems, either in real-time or for upload of batches of transactions. Alternately, the card may keep a counter of the amount of transactions at the particular merchant. Tracking data may be obtained by reading and resetting this counter by administrator (or merchant) systems. This counter can be implemented in a smart card memory or on a legacy magnetic stripe.

Further variations in the capture of transaction tracking information from payment network messages generated by the processing of payment cards of a wide variety of types are within the spirit of the above description that will be apparent to one of skill in the art in view of this description are also intended to be within the scope of this invention.

6.3.4. OTHER TRACKING MEANS

Other methods of obtaining member tracking information may also be used in the present invention. For example, member purchases that are made via an electronic wallet could be tracked. An electronic wallet is conventionally understood to be a software component that resides on a user's computer and includes user identifying data and data describing debit or credit cards that the user wishes to use for payment in on-line transactions. An electronic wallet automatically and securely provides on-line this payment information to a merchant. For use in the present invention, electronic wallet software would additionally transmit on-line transaction information to administrative systems 22 and 23 via, for example, the Internet. If a member with a local computer wishes to use an electronic wallet for providing tracking information, the member would first register for an electronic wallet on the administrative web site, and the electronic wallet software would be downloaded onto the member's computer. Alternatively, instead of an entire electronic wallet, upgrades or modifications to existing electronic wallets that performed the additional functions relied on by this invention could be downloaded. Then, the member's use of this electronic wallet in on-line purchases would automatically generate and send tracking information to the loyalty system databases.

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Generally, the present invention may be used with other electronic payment means, such as electronic checks, electronic cash, and so forth. These electronic payment forms may be implemented over computer networks, such as the Internet or private financial networks, or by use of devices such as smart cards, tamper-proof (or secure) memories, or so forth. These electronic payment systems can easily be adapted for use in the present invention in a manner generally similar to the methods described above for financial and payment networks. For example, messages already generated during processing of these other electronic payment means and containing transaction tracking information can be copied to the administrative systems of this invention. Alternatively, software modifications can generate additional messages with transaction tracking for the administrative systems of this invention. Thereby, member transaction tracking may then be collected without intervention of the member or the participant during transactions of all types where payment is implemented by such electronic payment means.

6.4. ALLOCATION OF LOYALTY AMOUNTS

With reference to Fig. 3, rebates and rewards due from participants because of member transactions are transferred, directly or indirectly, to escrow or other administrative account, or alternatively to an account of administrator. For each member, rebates received are allocated to loyalty vehicles, either periodically (e.g., daily, weekly, monthly, or so forth), or when a specific minimum has been received, or so forth, under control of the administrator.

With reference to Fig. 2, periodically database systems query rebate/reward/incentive information to determine the amounts due from the participants. The administrative systems then communicate, for example, via FTP server, a request to the participants for these amounts. The participants, as agreed, then request their banks to transfer these amounts to the financial institutions holding administrator accounts, or the escrow or other administrative account, or through the member agents. When the transfers are completed, the financial institutions notify the administrative system, for example, again through FTP server, and database systems update reward/rebate information, member accounts, and its account information in administrative information (or other data item), and other data items.

Also periodically, database system queries the database for funds available for allocation. This computation results in messages or FTP files transmitted to its agents, which instruct them, *inter alia*, to transfer monies to direct incentive accounts of the members or to security transfer agents, and to its security brokers to buy or sell securities.

The administrative system monitor replies from its agent indicating successful completion of their instructions. Items in database 26 are then appropriately updated.

The present invention can employ numerous loyalty vehicles. Illustrated in Fig. 3 are two preferred types vehicles, equity investments and current incentives. Selection between these two types, and between subtypes of each type, is typically under the control of the members. An individual member may, for example, have a longer term savings orientation and chose equity investments, or shorter term consumption orientation and chose current incentives. These control choices can be represented as allocation rules which are a function of, at least, member and participant identity, and also of other factors, such as type of transaction or product purchased or the existence of a participant's current promotion programs. Such rules would be executed by administrator 52 in the process of rebate or reward allocation.

The two illustrated loyalty vehicles are next described in more detail.

15 **6.4.1. EQUITY FUND INVESTMENTS**

In one embodiment, member rebates are at least partially allocated to equities, preferably equities of participants, and more preferably a fund that may include (at least in part) equities of participants. The latter embodiment is discussed in the following primarily with respect to merchant participants, but it can be immediately applied to participants of all types, for example to manufactures or to credit card issuers.

In more detail, equity investments can be, for example, investments in individual securities or in security funds including several securities (and, optionally, also cash). Individual securities are preferably securities of the participant furnishing the particular rebate to be allocated, or they may be one or more securities chosen by the member for investment. Security funds preferably include securities of the publicly-traded participants. Purchase and sale of securities or funds are only schematically illustrated in Fig. 3 by loyalty vehicle 63. In a typical scenario, the administrator would use a broker agent, which would buy and sell on security exchanges 65 under administrator 52 direction. Rebates and rewards allocated to equity investments would then be sent to (or received from) a transfer agent of the security broker, which would also hold and transfer securities. In the case of security funds, the transfer agent would also hold the fund's securities and issue shares proportionately to members. Members may also be able to request their own transactions in securities and funds as illustrated by interaction 68. The next subsection describes the operation of security funds in more detail.

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Loyalty vehicles including investment in security funds holding equities of participants are the preferred loyalty vehicles and are described next in more detail.

Concerning the preferred equity fund loyalty vehicle, now described are the preferred methods of converting rebates to shares in the fund, preferred methods for purchasing equities and the preferred methods for fund administration. These are followed by a fund example. First, in the preferred method of converting the rebates members have earned through their purchases at merchant sites into fund shares, database server 23 periodically (*e.g.*, preferably monthly) queries the member purchase/rebate information 29 to locate member accounts that have total rebate amounts that exceed a specified minimum amount (*e.g.*, the minimum amount may be less than \$10, \$100 or other appropriate amount) The result of the query is then compiled into a FTP file and sent to a FTP server at the transfer agent previously selected by the administrator. The administrator also causes monies in the escrow or other administrative account 56 corresponding to these rebate amounts (less any fees that may be charged by the administrator) to be forwarded to this transfer agent so that the monies can be invested in the equities 63, preferably in a merchant equity fund.

Next, in the preferred embodiment of purchasing merchant securities, database server 23 preferably queries stored purchase/rebate information 29 to determine what merchant securities should be purchased and in what amounts. Specifically, in the preferred automated embodiment, the database server 23 calculates the amount of rebate monies received from each publicly-traded merchant to be invested in the fund. Server 23 also preferably calculates the rebate monies received from non-publicly-traded (private) merchants and invested in the fund so that these monies may be invested across the fund's then existing portfolio (or otherwise invested). This information is then compiled into an FTP file that is sent via the administrator FTP servers 39 to the FTP server of a previously selected security broker.

The rebate monies are preferably invested as follows: First, to the extent that a merchant is, or is a subsidiary of, a publicly traded entity (a public merchant) listed on a nationally recognized United States securities market or international securities market (*e.g.*, the NYSE, the NASDAQ Stock Market, the London Stock Exchange, Tokyo Stock Exchange, etc.), the rebate monies received from the merchant are invested in shares of equity securities of that merchant or that merchant's publicly traded parent company. Second, to the extent that a merchant or its parent is not a publicly traded entity (a private merchant) listed on a nationally recognized United States securities market or international securities market, then the rebate monies received from the merchant may be preferably

invested across the fund's then existing portfolio. Alternatively, such private merchant rebate monies could be invested in other publicly traded companies. Third, the fund, may at the discretion of the administrator, invest rebate monies or other amounts invested in the fund (or reallocate rebate monies received from a specific merchant to shares of companies other than that merchant) to maintain the fund's diversification as may be required by SEC or other international regulations. Fourth, the fund, at the discretion of the administrator, may retain certain amounts in cash or invest in other securities as dictated by prudence and fiduciary considerations.

The selected broker purchases the merchant securities (as illustrated by interaction 66) as directed by the administrator and transmits a confirmation FTP file to the administrator FTP server 39. The server database 23 then accesses the confirmation file and automatically updates the stored investment fund information 30 to reflect the security purchases.

Instead of sending an FTP file to the broker, the database server 23 may simply generate information regarding what merchant securities should be purchased, and the administrator could then simply provide the purchase information to the broker verbally, in writing, or by some other electronic means. If a transfer agent is used, the broker or the administrator preferably provides the security purchase information to the transfer agent via an FTP file, via other electronic means, or through other available means. As mentioned above, the administrator may perform the functions of the broker.

As illustrated by interaction 67, the administrator periodically provides information concerning the fund to its members. In the preferred embodiment, the transfer agent periodically provides fund information to the administrator via an FTP file, via other electronic means, or through other available means, and such information is compiled by the administrator system and provided on member home pages and/or e-mailed to the members. For example, information concerning the fund such as reports, statements, forms, and general correspondence is made available on member account pages and/or is e-mailed to the members via the server.

The merchant equity fund provides investment returns to the members as also shown by interaction 67. Of course, the value of a member's investment in the fund is subject to not only earned rebates and direct fund-share purchases, but also the performance of the fund itself. Just like any fund, the value of the fund rises and falls with the value of its underlying securities. When a member seeks to redeem all or some of the member-owned shares in the fund for cash, the member is required to send a redemption form to the administrator. The form is preferably available on-line at the member account-page.

The redemption requests are preferably accepted and processed on a periodic basis such as daily, monthly, or quarterly. In the preferred embodiment, the redemption form is received on-line by the database server 23, compiled into an FTP file, and sent via administrator FTP server 39 to the selected transfer agent's FTP server. The transfer agent then processes the redemption form, and sends a confirmation file to the administrator FTP server 39. The server database 23 then accesses the file, and updates the stored investment fund information 30 and member account information 31. Other electronic means that can provide the relevant information to/from the administrative system 22 and 23 and the transfer agent may also be used.

Advantageously, members may also choose to make direct investments in the fund. Such investments may be completed at the administrator web site via a credit card purchase. Additionally, members may elect to make direct investments in the fund through direct deposit arrangements, checks submitted to the administrator, or through other payment mechanisms. Once the direct investment purchase is made, purchase/rebate stored information 29 is preferably automatically updated to reflect this activity. Advantageously, database server 23 may periodically calculate the total amount of such direct investments in the escrow or other administrative account, add it to the total amount of rebates received from private merchants, and invest or direct the broker agent to invest the total amount across the fund's then existing portfolio.

6.4.2. DIRECT INCENTIVES

Next, current incentives may be of several types, and are preferably implemented as id-payment cards of the debit type with associated authorization-time rules, which determine how the stored value may be used by authorizing or declining proposed payments. For example, a certain participant may wish to give an unrestricted "cash-back" promotion on certain products, in which use of these amounts are not subject to any rules. The cash-back amount can be changed from time-to-time upon information provided to administrator 52 by participant 51 (preferably by electronic messages between their computer systems). Alternatively, another participant may wish to limit use or rebates or rewards to the same of related products, in which case the rules would authorize payment only for these products. If a transaction is not authorized, a helpful, incentivizing message may preferably be returned to the member at the POS explaining the lack of approval. The tied products may be changed from time-to-time upon information provided by the participant. Also, a merchant may give rebates usable only at the store of the original

transaction. Other current incentive schemes, which are known to those of skill in the marketing arts, can be implemented by appropriate authorization time rules.

These rules, if any, associated with the amounts stored for a id-debit card are executed at authorization time by the issuing bank or by its third-party processor in order to authorize transactions.

6.5. OTHER EMBODIMENTS

While the invention has been described in conjunction with specific embodiments, it is evident that numerous alternatives, modifications, and variations will be apparent to those skilled in the art in light of the foregoing description. For example, while in the preferred embodiments, the database server 23 automatically updates its stored information to reflect member purchases, rebate monies owed to and received by the administrator, and information relating to the member's allocation among loyalty vehicles, the administrator may gather some or all of this information via other means and input such information into the database server 23. Moreover, many of the administrator functions described above may be out-sourced by the administrator to third party information processing organizations. For example, the tracking of member purchases, the billing of merchants for rebate monies, and the receipt of such rebate monies may be performed by an information processing organization under the general direction of the administrator. Moreover, the administration of the escrow account that holds the rebate monies may be out-sourced. In such cases, the relevant information is provided (preferably electronically) to the administrator, inputted into the database server 23, and maintained in the database server 23.

Also, the various processing and data storage functions of the invention can be allocated among the actors participating in a loyalty program other than in the preferred allocation described above. For example, participants may themselves store transaction-tracking information, whether it is determined by them or determined by a financial network or other electronic payment means. Using this stored tracking information, participants may then compute rebates due members on the basis of their own rebate schedules, and cause amounts due to be forwarded to the administrator without administrator intervention.

The invention described and claimed herein is not to be limited in scope by the preferred embodiments herein disclosed, since these embodiments are intended as illustrations of several aspects of the invention. Any equivalent embodiments are intended to be within the scope of this invention. Indeed, various modifications of the invention in

addition to those shown and described herein will become apparent to those skilled in the art from the foregoing description. Such modifications are also intended to fall within the scope of the appended claims.

5 A number of references are cited herein, the entire disclosures of which are incorporated herein, in their entirety, by reference for all purposes. Further, none of these references, regardless of how characterized above, is admitted as prior to the invention of the subject matter claimed herein.

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